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## SAMUEL WENDELL WILLISTON

### THE GREAT APOSTLE OF SIGMA XI

The Society of the Sigma Xi is called upon again to mourn the loss of one of its great leaders. No one came in contact with Doctor Williston without hearing of Sigma Xi; he was so full of the subject that it came out on every occasion and his enthusiasm inspired more than one indifferent member with zeal for the organization while it led those who did not know of it not only to look into its character but to endeavor to associate themselves with its work.

But while every one knew of this active interest there were few who are aware of the extent to which he had studied into the problems of the organization, suggested definite plans for its development and pushed them despite indifference and opposition to the point where they were taken up vigorously by the Society. No one knew this better than I who had the good fortune to be in personal contact with him at an early date; and from the mass of material gained by reading his letters I have gleaned a little that will be of special significance for this permanent record while at the same time it shows his early and almost intuitive perception of the difficulties which were to confront the organization with its development and the means which should be taken to meet and overcome these obstacles.

Professor Williston belonged to the Kansas Chapter which was organized in 1889 so early in the history of the Society that it seems never to have had a charter or a formal charter membership. Professor Williston was elected in 1893 and delivered one of the most important addresses before the chapter in June 1902. This was published under the title, *Higher Education in Kansas*, and enjoyed wide circulation. When he went to Chicago a movement was on foot for the establishment of a chapter there and he was called upon to preside at the first meeting when the chapter was installed on May 8, 1903. The part he played in that chapter is indicated in the Quarter Century Record and History and commented on by Professor Stieglitz in his tribute printed above.

One gets a vivid conception of his services to the Society in general from the number of responsible positions he has held. The lists in the Quarter Century Record and History show that he was Vice-president from 1899 to 1901 of the national organization, President from 1901 to 1904, chapter representative for the Kansas

chapter during 1895-1897 and again from 1897 to 1899, member of the Council from 1899-1904, Chicago representative 1907-1909, and member of the Council 1910-1911.

Mere perusal of these records fails to give any adequate conception of his activities. It was a strange thing for him to be absent from a meeting or to fail to bring to it helpful suggestions as well as well matured plans for the constructive work of the organization. As vice-president he presided over the Denver Convention in the unavoidable absence of the President, Professor Williams. The address of the Chairman which is printed in the Proceedings of the Fifth Convention outlines the main points of the address but fails, as any such brief statement must fail, to give an adequate idea of its character and influence. That was the second convention of Sigma Xi which I had attended and I well recall his splendid delineation of the origin of the Society, of its rapid and vigorous growth, of its increasing influence, especially in the great state universities of the Central West and of the effective stimulus to research which was the fruit of its efforts. No one who heard his portrayal of its standards and ideals, of the needs for research and the opportunity to stimulate it through this agency could have gone away without renewed enthusiasm for the organization and keener devotion to its work.

He presided over the sixth convention at Washington and his presidential address was printed in full in the proceedings and has been quoted widely since then. That part of it which deals specifically with the future development of the organization has stood ever since by vote of the convention as Appendix VI of the constitution. It was at that time that the first movement for modification of the badge, which was originally brought before the Denver Convention, took form through the appointment of a general committee concerning which Doctor Williston wrote me soon after the meeting at Washington announcing my appointment as a member of that committee and stating: "I think the Society in general desires some modification in the form [of the badge] though it is a question how great that modification should be \* \* \* I believe if any change is made it should be at once. Will you please place yourself in communication with these gentlemen at once. \* \*"

The Seventh Convention held at Philadelphia in December 1904 was also presided over by President Williston and his presidential

address is printed in full in the record of its proceedings. The item on which he laid greatest stress was the question of difference of opinion concerning the eligibility of undergraduate candidates for membership. He referred clearly to the difference in the character of the evidence in possession of teachers in applied science and those in pure science concerning the ordinary undergraduates with whom they come in contact and deplored the suggestions that different standards should prevail between the different schools of an institution. He urged the development of the closest union possible between pure and applied science together with frank and full recognition of the fundamental standard of membership and its impartial application to all alike. His thoughts on this subject may be well illustrated by two sentences from the address in which he says: "Perhaps the most imminent danger which confronts the Society is a too great liberality in dispensing its honors. While, as I have elsewhere urged, the Society should not and must not exist for the purpose of distributing honors, yet it must be very careful to whom its honors are given, that it may retain its high ideals and high standards."

At that convention he insisted upon retiring from the office of President and wrote me thereafter, in January 1904: "It was at my earnest request (perhaps also from the wish of the convention!) that I was relieved from the presidency. \* \* \* No one man can see all sides or appreciate all that is best for the Society. I am sure that the Society will continue to prosper but there are many new problems that must be fully met.

"Nearly two years ago we decided to publish an annual for the whole society and many are the inquiries I have received concerning it. I hope now that you will push the matter vigorously" [because I had been elected Secretary].

"We need very much a directory of the whole society and information concerning the working of different chapters, *lists of new members*, of various chapters, etc." This was the suggestion which led ultimately to the preparation of the Quarter Century Record and History.

Tho this marked his surrender of official authority he never lost his interest in the affairs of the Society, or his thoughtful planning for its future, and his active participation whenever anyone called upon him for advice or assistance in its work. It is a privilege to acknowledge here his constant willingness to advise and aid me

in the discharge of the duties of the office of Secretary. I never wrote him that I did not get an early and helpful response and I naturally grew to depend upon him as the one who could be called to assist whenever there was need.

The idea of making elections more significant was not abandoned with its mere statement in his last presidential address just quoted.

On October 10, 1905 he wrote: "The question of the conditions of election to membership is one of deepest moment to the Society, and I believe that it must soon come up in our national convention to the exclusion of all other things. Conditions have changed not a little during the past ten years, conditions which affect us closely. Before that time Phi Beta Kappa was disposed to elect only students of the classical courses. Now it is disposed to give its honors to students of all departments of the university not strictly professional, and in so far as it recognizes *scholarship* in science it conflicts with the older methods which prevailed in our society. I have not been at all sure that undergraduates should not be elected to membership [in Sigma Xi], but I suspect that they will finally be excluded except in those rare cases where research ability has been clearly proven.

"I found the question a burning one in——where I spent a week. There has been some friction at——because of the rigid insistence of conditions among faculty members. I ventured to suggest for the good of the chapter there that the line should not be drawn too strictly in the original membership but should be held sacred for all new members of the faculty.

"I wish that at the next convention the president or executive committee would appoint a number of the most active members of various chapters to prepare and read papers on *Conditions of membership* \* \* \* in other words that we have a symposium on the subject. The matter must be more clearly set forth and formulated than it has been in the past—all the chapters have had trouble and the condition will long confront us. We need more full discussion especially among the newer chapters. Publish your paper, it will help towards the final settlement of the matter."

One of the best statements of qualifications for membership which has been printed is that which he wrote for the QUARTERLY some years later:

"Attention is called to the communications in the present number of the QUARTERLY from Professors Prosser and Richtmyer concern-

ing the qualifications for membership in Sigma Xi. It has long been evident to those who have the welfare of the society at heart that the questions they propound are of vital importance; that, as Professor Richtmyer says, 'the most pressing need of the Society is some method of standardizing the criteria followed in the election of new members.' The editors will gladly receive communications from those who have suggestions to offer; and they urge that the subject be considered in every chapter.

"It is evident that an absolute standardization of the conditions of membership will be hard to attain; but it is also equally evident that a much more uniform standardization than now prevails among the different chapters can be and should be enforced. The present writer has thought much on these subjects during the past ten years, and he would beg to offer the following as his understanding of the conditions imposed by the constitution:

"First: What is included in a scientific investigation?

"Originality, either in the observation of new facts or in the deduction of new principles from previously known ones. No investigation should be considered as qualifying the candidate for membership that would not be accepted and published by a reputable technical journal or learned society as a real contribution to knowledge. Furthermore, investigation should not be accepted as satisfying the conditions of the constitution, unless of extraordinary merit, when there is reason for believing that the candidate will do no more research work.

"Second: What is meant by aptitude for scientific Work?

"Originality in the observation of new facts or in the deduction of new principles from previously known ones. The compilation of a text book, for instance, unless new methods are involved, does not make the writer an investigator. Such aptitude can only be satisfactorily determined by the actual performance of investigations sufficient to satisfy the proponents that the candidate not only can but will do such work.

"Third: Does the 'Giving promise of marked ability' as applied to undergraduates require the completion of research work?

"No; but it does mean more than the mere accumulation of knowledge. It means ability to use knowledge. It means originality, comprehension, application, and scholarship. However, if the amendments to the constitution, as proposed elsewhere in the

present QUARTERLY, or some modification of them concerning associate membership are adopted the chief danger that confronts the Society in the election of new members will be largely avoided. Diligent students with a strong love for science may then be admitted to probational membership with much good to themselves and to the Society.

"Fourth: How many graduates may be elected by a chapter?

"As many as show the necessary qualifications by the actual performance of meritorious research work. In general, all approved candidates for the doctorate in the university, under the limitations of the constitution, should be eligible for membership; and many of the approved candidates for the masters degree also.

"The writer fears that, in some chapters, the conditions of the faculty and graduate membership have not always been rigorously enforced. No faculty member should be considered as a candidate who does not possess the research spirit, either in the actual prosecution of research work himself or in his ability to guide and inspire students to do such work. The doctor of philosophy who has terminated his research work with his graduating thesis should, ordinarily, not be considered as eligible. Alumni membership is in a sense honorary membership, and especial care should be taken in its bestowal."

It would be helpful for all of us if this succinct and critical analysis of the situation might be read by every Board of Electors or every committee called upon to consider and recommend names for membership.

Professor Williston did not stop with the mere discussion of the topic. He followed up the matter by taking an active part in the committee which drew up the constitutional amendments that were presented to the Cleveland Convention and formed the basis of the conditions as stated in the present constitution. (See QUARTERLY, vol. I, p. 94, December 1913.) In the same number is (p. 110) Professor Williston's review of the *Quarter Century Record and History* in which, without even casual notice of the fact that he was responsible for the original suggestion which led to the preparation of that book or that he had done much to determine its form and to secure the material that went into it, he attributes the entire credit for the work to the Secretary who, he at that time insisted, should say nothing of *his* part in the work.

In 1914 he was appointed member of a committee to revise the constitution and took active part in the remodeling of the document as it now stands. In fact the most important features of change are those which he himself had suggested. In addition to items already mentioned, I might call attention to his position with regard to the question of associate membership. In January 1908 writing of the Chicago Convention and the Council meeting of the same date he says: "A new proposition came up which to me is very pleasing—to establish a sort of Junior Society for undergraduates taken in at the beginning of the junior year and kept on probation until the end of the senior year. I think it will solve one of the grave defects of our Society, especially now that the tendency is to limit membership to graduates." And speaking further of the blank cards sent out to secure data concerning members to make a record he says: "This kind of a record was what I so earnestly desired."

Out of this grew the specifications of the committee of which he was chairman which proposed amendments to the constitution covering dual membership (*QUARTERLY* vol. 2, p. 58, September 1914). In this work he was associated with two other distinguished members and past presidents of the Society, Professor E. L. Nichols and President C. S. Howe. Their report is a model of lucidity and fairness and should be read by all who wish to get in maximum compass the data for an understanding of the questions at issue and the reason for the modification of the original plan of the Society in the election of members.

Professor Williston had been for years advocating the establishment of a Society publication. The plan which he had often discussed with individual members and perhaps had also mentioned in a more formal way was presented to the Cleveland convention at the evening dinner on January 1, 1913 when President Eddy as toast master called upon him as "one of the founders of the Society," an appropriate tho not literally correct designation. A brief note indicating the character of his appeal reads, "It seems desirable that the Society should publish a bulletin giving news of the various chapters especially with regard to research work done." The following day, January 2, 1913, when the convention discussed the matter as had often been done before and hesitated to adopt the plan because of evident difficulties he offered to undertake the onerous duties of serving as Managing Editor. This was enough to bring



the convention to favorable action on the proposition. How little they knew of his other responsibilities and of the sacrifice he made is indicated by his letter. On January 8, 1913, he wrote:

"In fact I got a little anxious, after I had, rather impulsively, made the proposition at Cleveland, since I have a book on my hands that I have promised the publisher by next June, and I have nearly all the illustrations to get ready. I have seen the procrastinating spirit of conventions, and especially our conventions for so long, that I thought if something definite was not proposed the whole thing would go over indefinitely. And, I believe, to keep up the higher rank of the Society, which will undoubtedly now be attempted, something of the sort will be absolutely necessary. ALL THAT I AM INTERESTED IN IS TO SEE THE THING STARTED.

"First of all the name of the publication must be decided upon. Second we must come to some conclusion as to what it shall contain. The first number containing the report of the convention will be nearly all provided for. I firmly believe that a bibliographic record of the publications at least of all new members, should form a part of it, and I believe also that such a record of all active members will do much to stimulate zeal among the chapters. The academic record of all new members, the line of work engaged in, the titles of any published papers, at least so far as student members are concerned, and probably now of all faculty members, since with few exceptions they will be all young men who have not done a great deal. And we should discourage the admission of faculty members who have not done creditable work. The news of all the chapters should be included, lectures, public addresses, etc. So also I would have included all new appointments of members, the changes of addresses of faculty members, etc."

Overwhelmed by responsibilities for scientific work which he was publishing he begged me to help him out and as a friend I was only too glad to come to his relief. How real his editorial burden was is indicated by many letters, for he, despite other heavy responsibilities, did all the correspondence while that year I only handled the material that he collected and cared for the mechanical part of publishing it. Thus in writing me November 23, 1913, about the December QUARTERLY for which he had agreed to furnish certain copy he says "I am still waiting anxiously to hear from . . . . .and . . . . .and

.....and.....and.....to all of whom I have written urgently. All promised articles before the first of the month. You see if they keep their promises there will be more than we can use."

And again, "I have received a report from the .....Chapter, but as usual without the qualifications of graduate and alumni members. I have sent back the list of names for additions. I observe the report of the .....Chapter is also deficient. I am tired of returning so many of them.....But I am not discouraged. Sigma Xi will arise all the better [from this agitation] and on a higher plane than ever before."

In 1917 at the meeting of the Executive Committee in Chicago Doctor Williston attended the evening dinner and discussed the general policy and development of the Society with wonted vigor and enthusiasm.

The last letter Professor Williston wrote me about the Society and its activities was dated December 3, 1917. In it he said:

"I shall certainly be at Pittsburgh if I am able to consume my daily rations, and my appetite is good now!

"I only fear that if I get to talking at the Sigma Xi I may speak rather vigorously. It seems to me that there is a great future before the Society if we will only recognize it, and I get impatient with those who would stifle it and make it a toy society. I am obliged to you for sending the..... circular.....I had not seen it, and I shall have something to say about it."

He *did* reach Pittsburgh and took part in the convention for he spoke at the dinner pointing out forcefully the tremendous increased possibilities that were offered to Sigma Xi by the European war and by the inevitable destruction of productive research in European universities. He urged as the paramount need of the Society fuller knowledge of work done in its various units with much closer co-operation between chapters.

It is not too much to say that no man has done more to initiate movements of significance to the Society than Professor Williston and no man has been more active for a longer period of years. It is fortunate indeed that in the period when Sigma Xi grew from a little organization to a powerful educational factor embracing in its activities the length and breadth of the nation he should have preserved constant and active interest in its work and have been willing

to contribute, often at a sacrifice, to directing its policy. Historically the Society cannot look upon him as one of its founders, but as the years pass by it will recognize more and more clearly in him one of its greatest organizers and builders.

HENRY B. WARD  
*Secretary of Sigma Xi*